

USBP Meeting in Nogales

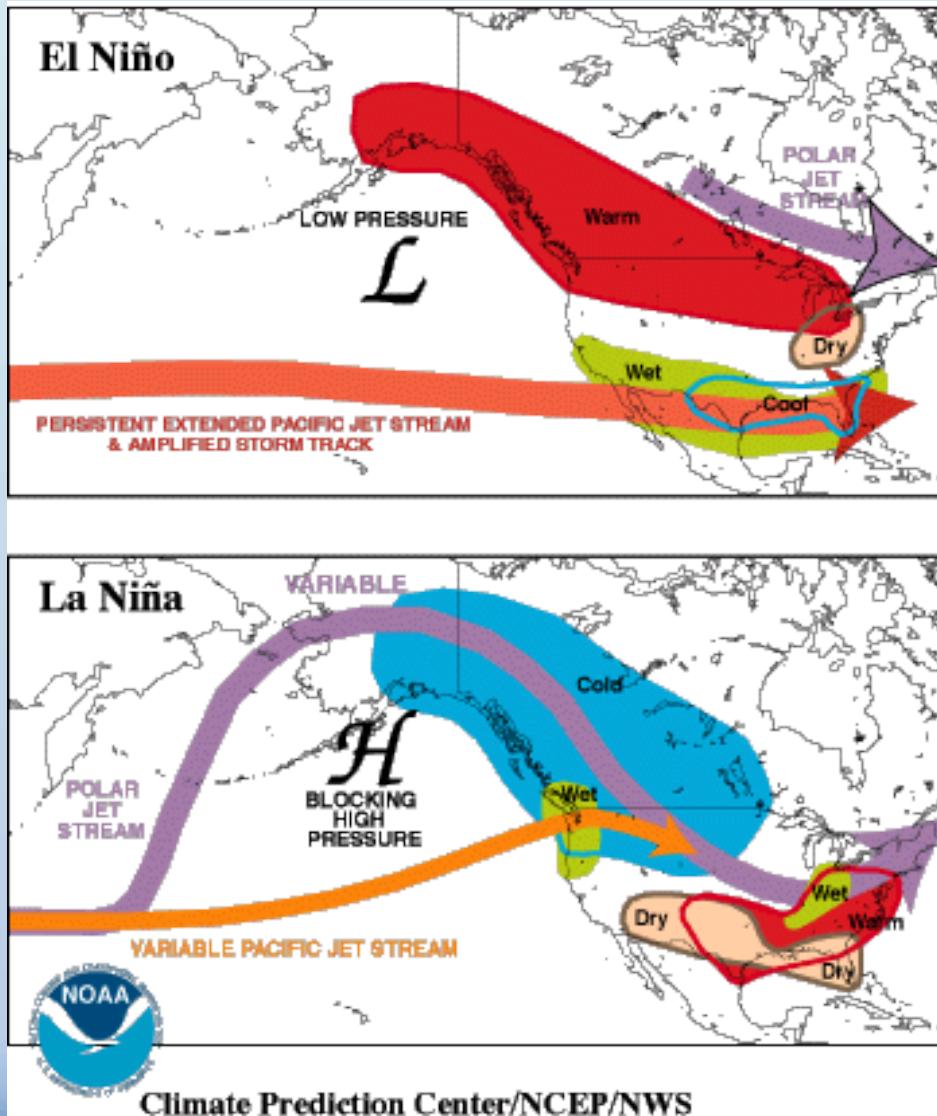
September 21, 2015



National Weather Service Tucson



What is El Niño and La Niña?



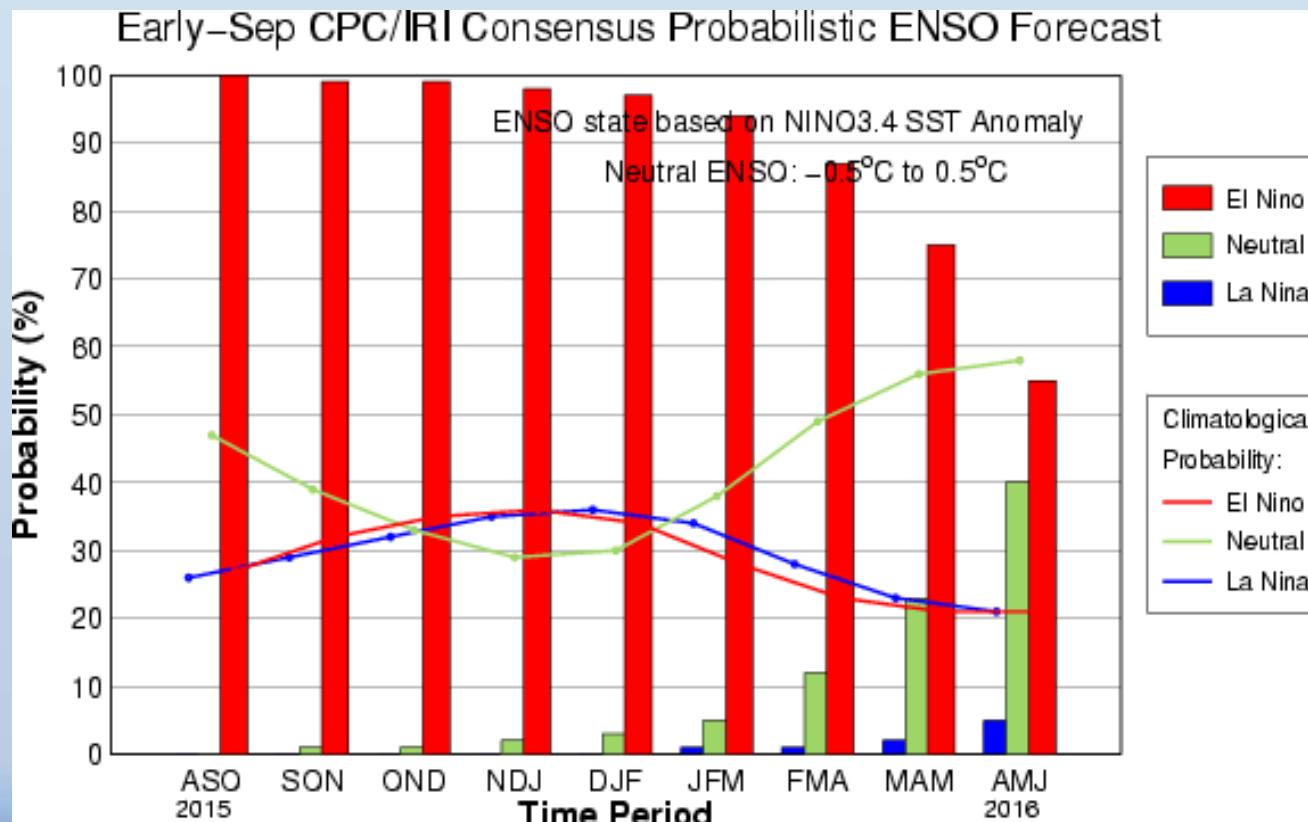
- Sea surface temperatures determine the location of the jet stream.
- Jet stream affects the frequency of storms affecting an area, not the intensity.



Climate Prediction Center/NCEP/NWS

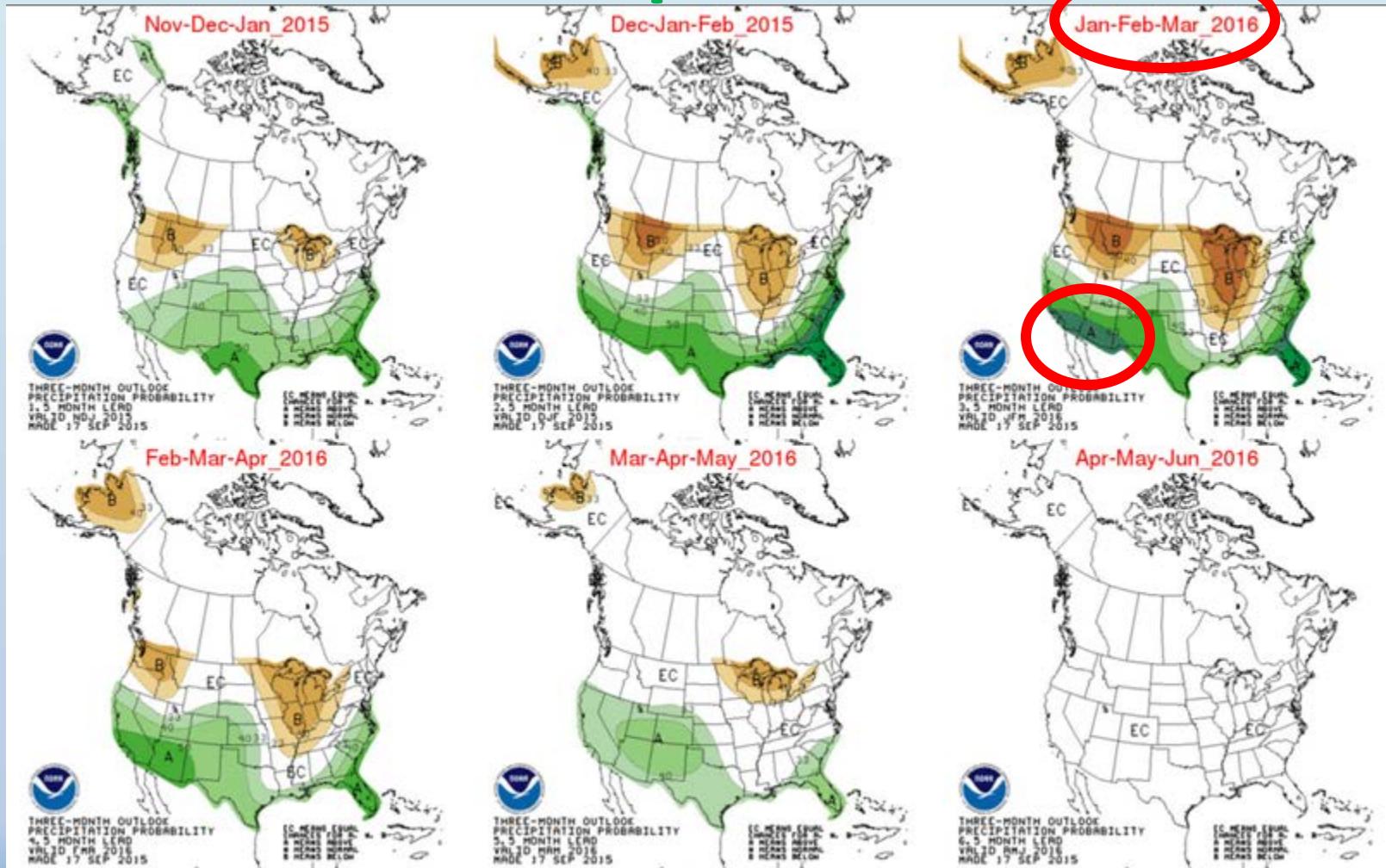
What's happening with El Niño/La Niña?

The chance of El Niño is approximately 95% through Northern Hemisphere winter and is near 55% by the late spring (AMJ) 2016.



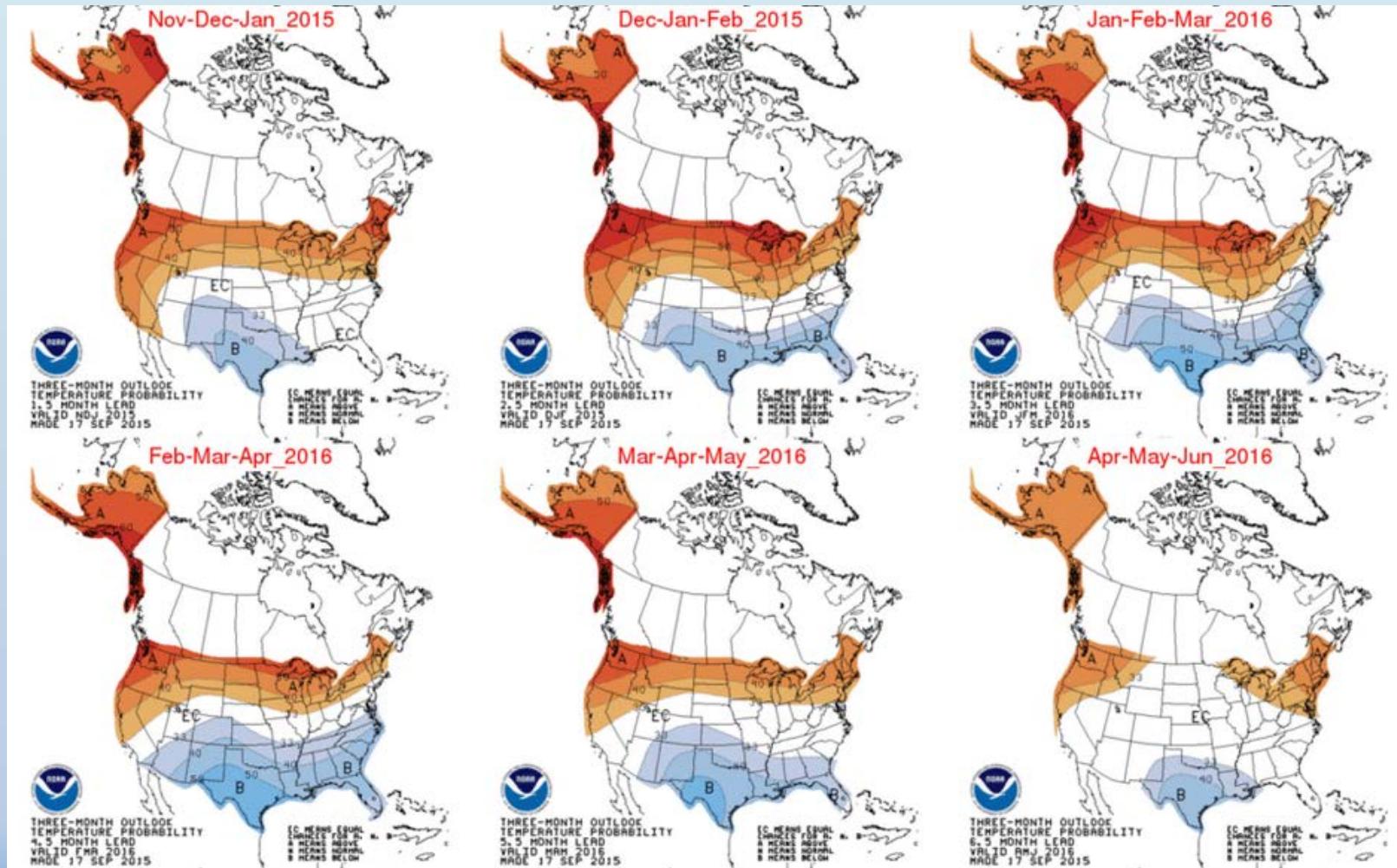
Winter Outlook 2015/2016

Precipitation



Winter Outlook 2015/2016

Temperature



ONI ($^{\circ}\text{C}$): Evolution since 1950

The most recent ONI (Oceanic Nino Index) value (June - August 2015) is 1.2°C .

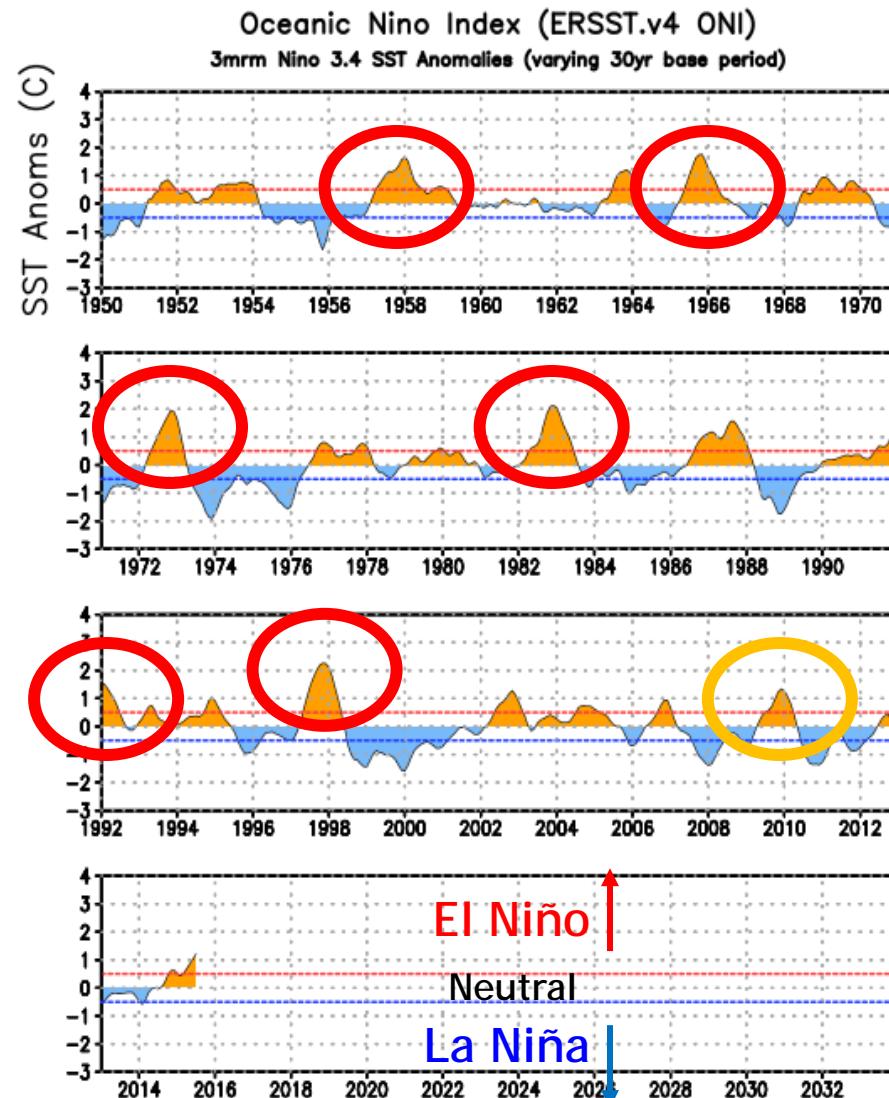
Note previous strong El Ninos ($> +1.5^{\circ}\text{C}$) occurred in the following winters:

1957-58 (1.7) 1965-66 (1.8)

1972-73 (2.0) 1982-83 (2.1)

1991-92 (1.6) 1997-98 (2.3)

2009-10 was close but was officially a “moderate” (1.3°C)



Past El Niño Winter Precipitation

Historically, Moderate to Strong El Niños (SEN) have a correlation to above normal precipitation in SE AZ.

Tucson	Nov	Dec	Jan	Feb	Mar	NDJFM	DJF	DJFM
1957-58	0.56	0.89	T	1.15	1.82	4.42	2.04	3.86
1965-66	0.77	5.02	1.74	2.25	0.19	9.97	9.01	9.20
1972-73	1.30	0.61	0.06	1.60	2.20	5.77	2.27	4.47
1982-83	1.30	1.59	1.70	0.94	1.28	6.81	4.23	5.51
1991-92	0.80	1.44	1.21	1.80	2.12	7.37	4.45	6.57
1997-98	0.49	2.88	0.17	3.20	1.64	8.38	6.25	7.89
SEN AVG	0.87	2.07	0.98	1.82	1.54	7.12	4.71	6.25
2009-10	0.13	0.30	2.10	1.89	0.52	4.94	4.29	4.81
81-00 AVG	0.57	0.93	0.94	0.86	0.73	4.03	2.73	3.46



El Niño Winter Expectations

- Greater likelihood of above average precipitation. In other words:
 - Below average: 2-3 storms
 - Near average: 5-6 storms
 - * **Above average: 8-9 storms**
- Above normal mountain snowfall
- Above normal valley rainfall



El Niño Winter Expectations

- Precipitation and cloud cover during storms will lead to overall cooler daytime high temperatures for the season...
- And warmer nighttime temperatures.
- With increased moisture, some frost events are still possible, but...
- Very hard freeze events below 25°F are not as likely.



75th Anniversary Open House



October 17th

10 AM - 3 PM

- Office tours
- Weather balloon launch
- Fun activities for all ages
- Special guests



520 N. Park Ave, on the NE corner of 6th and Park : Free parking available in 6th St Garage



National Weather Service Tucson, AZ | weather.gov/tucson



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